MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

H. F. NEWALL, Esq., PRESIDENT, in the Chair.

John Bullock, M.A., 78 Airedale Avenue, Chiswick, W.;

Arthur Brunel Chatwood, B.Sc., Assoc.M.Inst.C.E., Astronomer to the Government of H.H. The Nizam, Hyderabad, Deccan, India;

F. R. Cripps, Esq., 22 Hornsey Rise Gardens, N.;

Henry Zouch Darrah, Esq., C.S.I., Allahabad, U.P., India;

Charles Gaskell Falkner, Esq., M.A., Ireton Bank, Rusholme, Manchester;

Harold Morris-Airey, Esq., M.Sc., Armstrong College, Newcastle-upon-Tyne; and

Henry William Moore, B.A., New University Club, St. James's Street, and 64 Curzon Street, Mayfair, W.,

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended:—

Hugh Cameron Campbell, Science Department, Surgeons' Hall, Edinburgh (proposed by Alex. D. Russell); and

Arthur Mackreth Deane, M.A., Canon of Chichester, Ferring Vicarage, Worthing, Sussex (proposed by F. J. W. Crowe).

The following were proposed by the Council as Associates of the Society:—

Benjamin Baillaud, Director of the Observatory, Paris;

C. V. L. Charlier, Director of the Observatory, Lund, Sweden;

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E. B. Frost, Director of the Yerkes Observatory, Williams Bay,
Wisconsin, U.S.A. ;

The Rev. J. G. Hagen, S.J., Director of the Vatican Observa-
tory, Rome ; and

Johannes Franz Hartmann, Astrophysical Observatory, Potsdam,
Germany.

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Seventy-one presents were announced as having been received
since the last meeting, including, amongst others :—

J. G. Böhn, die Kunst-Uhren auf der K.-K. Sternwarte zu Prag,
presented by the Prague Observatory; The History of the
Geological Society of London, by H. B. Woodward, presented by
the Society.

'Sixteen charts of the Astrographic Chart of the heavens,
presented by the Royal Observatory, Greenwich.

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*On the Lunar Inequalities due to the Motion of the Ecliptic and the
Figure of the Earth.* By Ernest W. Brown, Sc.D., F.R.S.

§ 1. *The general disturbing function for the motion of the
ecliptic.*—Let θ_1, θ_2, θ_3 be the angular velocities of a set of
moving rectangular axes about themselves ; x, y, z the co-ordinates ;
u, v, w the velocities of a particle with respect to these axes ; and
let F be the force function divided by the mass of the particle.
Then the equations of motion are given by

$$\frac{du}{dt} - v\theta_3 + w\theta_2 = \frac{\partial F}{\partial x},$$

$$\frac{dv}{dt} - w\theta_1 + u\theta_3 = \frac{\partial F}{\partial y},$$

$$\frac{dw}{dt} - u\theta_2 + v\theta_1 = \frac{\partial F}{\partial z},$$

where

$$u = \frac{dx}{dt} - y\theta_3 + z\theta_2,$$

$$v = \frac{dy}{dt} - z\theta_1 + x\theta_3,$$

$$w = \frac{dz}{dt} - x\theta_2 + y\theta_1.$$

Put

$$H = \tfrac{1}{2}(u^2 + v^2 + w^2) - F - R,$$

where

$$R = vx\theta_3 - wx\theta_2 + wy\theta_1 - uy\theta_3 + uz\theta_2 - vz\theta_1 ;$$